R E M A R K S

Careful review and examination of the subject application are noted and appreciated.

CLAIM REJECTIONS UNDER 35 U.S.C. §102

The rejection of claims 1, 2, 4-16 and 18-20 under 35 U.S.C. §102(b) as being anticipated by Cahill, III et al. (U.S. Patent No. 5,784,047; hereinafter Cahill) is respectfully traversed and should be withdrawn.

Cahill is directed to a method and apparatus for a display scaler (Title).

In contrast, the present invention provides an apparatus for variably scaling video picture signals comprising an address generator circuit configured to generate one or more first control signals, where the address generator comprises **a finite state machine configured to allow multiple luma and multiple chroma picture requests to follow in sequence**.

Assuming, *arguendo*, (i) the vertical and horizontal DDA control & counter unit 116 in FIG. 5 of Cahill could be considered similar to the presently claimed address generator circuit and (ii) the advanced state machine 262 in FIG. 6A of Cahill could be considered similar to the presently claimed finite state machine (as suggested on page 4, lines 1-10 of the Office Action and for which Applicant's representative does not necessarily agree), Cahill does not disclose or suggest each and every element of the

presently claimed invention, arranged as in the present claims. Specifically, the vertical and horizontal DDA control & counter unit 116 of Cahill is part of a display control unit 118 (see FIGS. 4 and 5 and column 8, lines 57-60 of Cahill). Cahill teaches two separate display control units: a control unit 118 for luma (Y) and a control unit 118a for chroma (U and V).

In particular, Cahill states:

> While each of the Y, U, and V components includes a separate vertical prefetch buffer, vertical scaler, horizontal prefetch buffer and horizontal scaler, there are typically only **two display control units** provided for the three components of the bitmaps since the U and V component bitmap data can be controlled simultaneously. However, three separate display control units can be employed, if desired. While **display control unit 118 controls Y memory 102a**, vertical prefetch buffer 107, vertical scaler 108, horizontal prefetch buffer 109, and horizontal scaler 110, **display control unit 118a controls U memory 102b**, vertical prefetch buffer 107b, vertical scaler 108b, horizontal prefetch buffer 109b, horizontal scaler 110b, **V memory 102c**, vertical prefetch buffer 107c, vertical scaler 108c, horizontal prefetch buffer 109c, and horizontal scaler 110c that process the U and V components of the bitmaps (column 8, lines 13-28 of Cahill, emphasis added).

Since (i) Cahill states that the display unit 118 controls the Y (i.e., luma) memory 102a and a separate display unit 118a controls the U and V (i.e., chroma) memories 102b-c and (ii) Cahill teaches that each display unit has a state machine 262 (see FIG. 6A of Cahill), it follows that Cahill does not disclose or suggest **A** finite state machine configured to allow **multiple luma AND multiple chroma** picture requests to follow in sequence, as presently

claimed. Therefore, Cahill does not disclose or suggest each and every element of the presently claimed invention, arranged as in the present claims. As such, the presently claimed invention is fully patentable over the cited reference and the rejection should be withdrawn.

Furthermore, Cahill states that "FIG. 16 is a state diagram of advance state machine 262 in FIG. 6" (column 18, lines 14-16 of Cahill). FIG. 16 of Cahill appears silent regarding both luma requests and chroma requests. Since the state diagram of the advanced state machine 262 of Cahill is silent regarding both luma and chroma requests, it follows that Cahill does not disclose or suggest a finite state machine configured to allow **multiple luma AND multiple chroma** picture requests to follow in sequence, as presently claimed. Therefore, Cahill does not disclose or suggest each and every element of the presently claimed invention, arranged as in the present claims. As such, the presently claimed invention is fully patentable over the cited reference and the rejection should be withdrawn.

CLAIM REJECTIONS UNDER 35 U.S.C. §103

The rejection of claims 3 and 17 under 35 U.S.C. §103 as being unpatentable over Cahill in view of Malinowski et al. (U.S. Patent No. 5,574,572; hereinafter Malinowski) is respectfully traversed and should be withdrawn.

The rejection of claims 21-23 under 35 U.S.C. §103 as

being unpatentable over Cahill in view of Ozcelik et al. (U.S. Patent No. 6,078,616; hereinafter Ozcelik) is respectfully traversed and should be withdrawn.

Claims 3, 17 and 21-23 depend directly from either claim 1 or claim 16 which are believed to be allowable. For the reasons presented above, the Office Action does not appear to factually establish that the cited references teach or suggest each and every element of the presently claimed invention. Therefore, the Office Action fails to meet the Office's burden to factually support a *prima facie* conclusion of obviousness (MPEP §2142). As such, the presently claimed invention is fully patentable over the cited references and the rejection should be withdrawn.

Furthermore, with respect to claims 21 and 22, FIG. 6 of Ozcelik appears silent regarding (i) a BTMP after luma state and (ii) an SPU/VBI state, as presently claimed. Since Ozcelik is silent regarding (i) a BTMP after luma state and (ii) an SPU/VBI state, as presently claimed, it follows that Cahill and Ozcelik do not teach or suggest either (a) an idle after chroma state configured to move to **ANY** of (i) a luma state, (ii) a BTMP after luma state, (iii) an SPU/VBI state, (iv) an idle after luma state, **AND** (v) a chroma state, as recited in claim 21 or (b) an idle after luma state configured to move to **ANY** of (i) a chroma state, (ii) a BTMP after chroma state, (iii) an SPU/VBI state, (iv) a luma state **AND** (v) an idle after chroma state, as recited in claim 22. Furthermore, the use of the single state 620 of Ozcelik as two

different claimed states (i.e., an idle after luma state and an idle after chroma state) does not appear to be proper (see page 11, lines 7-14 of the Office Action). Therefore, the Office Action fails to meet the Office's burden to factually support a *prima facie* conclusion of obviousness (MPEP §2142). As such, the presently claimed invention is fully patentable over the cited references and the rejection should be withdrawn.

With respect to claim 23, the Office Action fails to present any factual evidence or convincing line of reasoning why a person of ordinary skill in the field of the invention would consider moving through a plurality of states (i.e., moving from a wait_new_mb state 620 to a get_addr1 state 622, then from the get_addr1 state 622 to a get_ref_b1 state 626, then from the get_ref_b1 state 626 to a y1_wait state 628, then from the y1_wait state 624 to a y1_recon state 630) as being the same as either (a) moving from an idle after chroma state to a chroma state or (b) moving from an idle after luma state to a luma state, as presently claimed (see page 11, lines 15-22 of the Office Action). Therefore, the Office Action fails to meet the Office's burden to factually support a *prima facie* conclusion of obviousness (MPEP §2142). As such, the presently claimed invention is fully patentable over the cited references and the rejection should be withdrawn.

Accordingly, the present application is in condition for allowance. Early and favorable action by the Examiner is respectfully solicited.

The Examiner is respectfully invited to call the Applicants' representative at 586-498-0670 should it be deemed beneficial to further advance prosecution of the application.

If any additional fees are due, please charge Deposit Account No. 12-2252.

Respectfully submitted,

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